



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

**BEST AVAILABLE COPY**

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/907,182	08/06/1997	SHUNPEI YAMAZAKI	07977/023002	7978

20985 7590 06/27/2002

FISH & RICHARDSON, PC  
4350 LA JOLLA VILLAGE DRIVE  
SUITE 500  
SAN DIEGO, CA 92122

EXAMINER

DIAMOND, ALAN D

ART UNIT PAPER NUMBER

1753

DATE MAILED: 06/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

08/907,182

Applicant(s)

YAMAZAKI ET AL.

Examiner

Alan Diamond

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99 and 103-106 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 1997 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 08/623,336.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 22, 23 and 26
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 27
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1753

## DETAILED ACTION

### *Comments*

1. The Examiner agrees with applicant the none of Funada et al (U.S. 5,614,426), Tanaka et al (U.S. 6,251,712), and Serial No. 08/928,750 teaches or suggests forming a layer including a gettering material over a crystallized semiconductor film or implanting a gettering material into a top portion of a crystallized semiconductor film and then removing that top portion after a gettering operation. Accordingly, since the instant independent claims have been amended to recite these features, the prior art and double patenting rejections over Funada et al (U.S. 5,614,426), Tanaka et al (U.S. 6,251,712), and Serial No. 08/928,750 are now deemed moot.

### *Irradiated Mail*

2. The papers filed on February 19, 2002 (certificate of mailing dated October 8, 2001) have not been made part of the permanent records of the United States Patent and Trademark Office (Office) for this application (37 CFR 1.52(a)) because of damage from the United States Postal Service irradiation process. The above-identified papers, however, were not so damaged as to preclude the USPTO from making a legible copy of such papers. Therefore, the Office has made a copy of these papers, substituted them for the originals in the file, and stamped that copy:

COPY OF PAPERS  
ORIGINALLY FILED

---

If applicant wants to review the accuracy of the Office's copy of such papers, applicant may either inspect the application (37 CFR 1.14(d)) or may request a copy of the Office's records of such papers (*i.e.*, a copy of the copy made by the Office) from the Office of Public Records for the fee specified in 37 CFR 1.19(b)(4). Please do **not** call the Technology Center's Customer Service Center to inquiry about the completeness or accuracy of Office's copy of the above-identified papers, as the Technology Center's Customer Service Center will **not** be able to provide this service.

Art Unit: 1753

If applicant does not consider the Office's copy of such papers to be accurate, applicant must provide a copy of the above-identified papers (except for any U.S. or foreign patent documents submitted with the above-identified papers) with a statement that such copy is a complete and accurate copy of the originally submitted documents. If applicant provides such a copy of the above-identified papers and statement within **THREE MONTHS** of the mail date of this Office action, the Office will add the original mailroom date and use the copy provided by applicant as the permanent Office record of the above-identified papers in place of the copy made by the Office. Otherwise, the Office's copy will be used as the permanent Office record of the above-identified papers (*i.e.*, the Office will use the copy of the above-identified papers made by the Office for examination and all other purposes). This three-month period is not extendable.

### ***Claim Objections***

3. Claim 72 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 72 does not further limit parent claim 67 because claim 67 requires that the semiconductor film comprises amorphous silicon. Thus, specifying that the semiconductor film comprises silicon, as in claim 72, does not further limit claim 67.

4. Claims 83 and 87 are objected to because of the following informalities:

In claim 83, the last word in line 9 has been covered up, apparently during photocopying, so that said last word cannot be read. A clean copy of claim 83 is requested.

In claim 87, at line 10, the term "[by plasma doping]" should be deleted.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1753

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 81, 83-85, 87-89, 104, and 105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 89, at the second-to-last line, it is not clear which portion is being referred to by the term "said portion". It is suggested that "of the crystallized semiconductor film" be inserted after "said portion" at the second-to-last line in claim 89.

In each of claims 81, 83-85, 87-89, 104, and 105, it is requested that each occurrence of the term "gettering element" be changed to "gettering material".

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 1753

8. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 8-349735, herein referred to as JP '735.

As seen in Example 5, JP '735 forms a gettering layer containing chlorine on the crystallized semiconductor film, getters the metal catalyst from the semiconductor film, and then removes the gettering layer. Since JP '735 teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

9. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al, U.S. Patent 5,529,937.

Zhang et al teaches the claimed method by forming a silicon oxide gettering layer on the crystallized silicon film, and then etching the oxide film after gettering nickel catalyst from the crystallized semiconductor film (see abstract; and col. 4, lines 33-55). Since Zhang et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

10. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al, U.S. Patent 5,789,284.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. The Examiner acknowledges that a certified English translation of one of the instant Japanese priority documents, i.e., JP 7-110121 (Paper No. 9) is of record in the instant application. However, said the certified English

Art Unit: 1753

translation of instant Japanese priority document 7-110121 does not fully support the presently claimed invention.

Yamazaki et al forms an amorphous silicon film on a crystallized silicon film in order to getter the nickel catalyst from the crystallized silicon film, and then the amorphous silicon film is removed (see abstract; and col. 7, line 11 through col. 8, line 62). Since Yamazaki et al teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

### ***Double Patenting***

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of copending Application No. 08/831,088.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of said copending application teach the instant method steps.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56 of U.S. Patent No. 5,529,937. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of said copending application teach the instant method steps.

14. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-64 of U.S. Patent No. 5,789,284. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of said copending application teach the instant method steps.

15. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,071,766. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of said copending application teach the instant method steps.

16. Claims 26-30, 32-55, 57-76, 78, 79, 81-91, 93-99, and 103-106 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of copending Application No. 09/838,216. Although the conflicting claims are not identical, they are not patentably distinct from

Art Unit: 1753

each other because the method claims of said copending application teach the instant method steps.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 703-308-0840. The examiner can normally be reached on Monday through Friday, 6:15 a.m. to 2:45 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 703-308-3322. The fax phone numbers

Art Unit: 1753

for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a stylized flourish at the end.

Alan Diamond  
Primary Examiner  
Art Unit 1753

Alan Diamond  
June 24, 2002